United States
Department of
Agriculture

Soil
Conservation
Service

Program Aid
Number 1473

National Plant Materials Program

Finding Vegetative Solutions to Conservation Problems

Cover: Plant Materials Centers collect many kinds of evaluation data on thousands of plants annually and select the superior ones for release to commercial growers.

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Developing Specialized Vegetation

The Soil Conservation Service (SCS) provides technical assistance to owners and managers of land to help them develop and implement plans to use their soil and water resources wisely. These plans frequently require the use of specialized vegetation. SCS develops the needed plants and the best uses for them through its National Plant Materials Program. Specialized vegetation helps landowners contribute to local and national SCS efforts to protect and enhance the environment. Major areas of concentration include:

- Reducing erosion on cropland by developing cover cropping systems,
- Improving and protecting the quality of surface and ground water,
- Improving the condition and production of grazing land,
- Protecting, creating, and restoring wetlands, riparian areas, and coastal shorelines,
- Providing protective cover on disturbed areas,

Cover crops—such as clover, red fescue, and ryegrass—are tested at PMC's to ascertain their usefulness in vineyards.

- Improving wildlife habitat, and
- Accelerating the commercial production of conservation plants in high demand.

Much of the work to develop plants and the technology for the use of the plants is done at plant materials centers (PMC's) located in a cross section of topographic and climatic regions throughout the country.

A windbreak of Imperial Carolina Poplars protecting cropland in Michigan: PMC's evaluate plants for use as shelterbelts and windbreaks in cropland areas with high wind erosion problems.

To develop conservation plants, scientists at the PMC's:

- Determine which methods or plants might have potential for solving high-priority problems and collect as many variations of the plants as possible,
- Evaluate the methods and collections at the PMC's and select superior ones to test further on actual problem sites,
- Make the best plants available to the public after selection by providing genetically pure material and production information to commercial growers, and
- Carry out a public information campaign to announce the availability of the new plants or methods.

Location of PMC's

Pullman, WA
Corvallis, OR
Lockeford, CA
Bridger, MT
Aberdeen, ID
Tucson, AZ
Meeker, CO
Los Lunas, NM
Bismarck, ND
Manhattan, KS
Knox City, TX
Nacogdoches, TX
Kingsville, TX
Elsberry, MO
Booneville, AR
Golden Meadow, LA
Rose Lake, MI
Quicksand, KY
Coffeeville, MS
Big Flats, NY
Cape May, NJ
National PMC, Beltsville, MD
Americus, GA
Brooksville, FL
Palmer, AK
Hoolehua, HI

Accomplishments

Approximately 300 plants have been cooperatively released to commercial producers since 1937. The retail value of the commercial production from the 203 SCS plants still on the commercial market was $78 million in 1989. Currently, more than 30,000 individual variations of plants (accessions) are under evaluation, and more than 3,000 individual evaluation plantings are being conducted on the property of farmers and ranchers.

Crider Memorial Garden at the National Plant Materials Center, Beltsville, Maryland. These garden plots display in one location some of the many plants available to the public for conservation uses.

PMC's Combine Talents With Other Agencies

All PMC's work closely with a number of Federal and State agencies. Although the nature and intensity of the cooperative relations vary, ongoing activities typically exist between each PMC and the U.S. Department of Agriculture's Extension Service and Agricultural Research Service, State agricultural experiment stations, State crop improvement associations, and State departments of natural resources.

In addition, a specific PMC may develop a unique cooperative relationship with a Federal or State agency or private group to help fulfill a special local need.

The Coffeeville, Mississippi, PMC is pioneering the development of no-till cotton.

The PMC's came into existence to fill the recognized need to find vegetative solutions to conservation problems. New challenges being addressed or considered include:

- Supporting sustainable agriculture, including cropland conversion from annual to perennial crops,
- Controlling the spread of noxious weeds on grazing lands,
- Using grass hedges for building inexpensive terraces to facilitate erosion control and water conservation,
- Preserving native germplasm, and
- Recovering endangered plant species.

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